

Applicant : Rainer B. Nees et al
Serial No. : 10/761,447
Page No. : 5

REMARKS

Applicants respectfully request reconsideration of the above-identified patent application. Claims 1-3 and 5-7 remain in the application. Claims 1 and 5 are amended to more particularly point out and distinctly claim the subject matter that Applicants regard as their invention. Claim 4 is canceled in addition to previously canceled claims 8-19. Applicants respectfully traverse the rejections under 35 U.S.C. 102 and 35 U.S.C. 103.

I. Invention Summary

The present invention is directed a vehicle doorbeam that enhances the impact strength of vehicle doors and thereby enhances safety. The doorbeam is relatively simple and inexpensive, and provides the necessary strength and desired weight. The beam is easily adaptable between vehicles.

As defined in amended independent claims 1 and 5, the one-piece vehicle doorbeam includes (a) a deformable web closed upon itself, (b) circumferential portions of different thicknesses, and (c) end portions integral with the tube and adapted for attachment to a vehicle door. As further defined in claim 5, the outer surface of the tube is generally circular in cross section, and the inner surface is generally noncircular in cross section, so that the differences in the thickness of the walls are attributed to the noncircularity of the inner surface.

The Examiner asserts that the term "vehicle doorbeam" does not carry patentable weight because the recitations occur in the preamble. Applicants respectfully traverse this assertion because these terms do indeed carry patentable weight. "If the preamble is necessary to

Applicant : Rainer B. Nees et al
Serial No. : 10/761,447
Page No. : 6

give life, meaning, and vitality to the claim, then the preamble should be read to be in the balance of the claim.” *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999). In this case, it is clear that the term “doorbeam” is necessary to give life and meaning to the claims, because it is necessary to understand the recitations “attachment portions that are adapted to attach to a vehicle door” that appear in the body of the independent claims. In addition, “any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. *MPEP* 2111.02 (May, 2004). In the present case, the term “vehicle doorbeam” is clearly a limitation on the structure of the present invention, as it limits the invention solely to a vehicle doorbeam. Finally, the Federal Circuit has stated that “clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation, because such reliance indicates use of the preamble to define, in part, the claimed invention.” *Catalina Mktg. Int’l Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808-809, 62 U.S.P.Q.2d 1781, 1785 (Fed. Cir. 2002) (citing *Bristol-Myers Squib Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1375, 58 U.S.P.Q.2d 1508, 1513 (Fed. Cir. 2001)). Applicants state on the record that the term “vehicle doorbeam” as recited in the preamble of claims 1 and 5, is relied upon to define the claimed invention. Applicants therefore submit that these recitations carry patentable weight.

II. Specification

The specification is amended to provide literal support for the term “attachment portions.”

Applicant : Rainer B. Nees et al
Serial No. : 10/761,447
Page No. : 7

III. Section 102 Rejections

A. U.S. Patent 5,668,440 to Bauer et al

As originally presented, claims 5-7 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,668,440 to Bauer et al.

Bauer discloses a pipe for a heat exchanger. The pipe is formed from a strip material whose edges are joined together by a weld seam. In the region where the strip edges are joined together, there is a thinner wall thickness than the rest of the strip material.

It is well settled that anticipation can only be established by a single prior art reference that identically discloses each and every element of the claimed invention. Anticipation is not shown even if the difference between the claims and the prior art reference are insubstantial. Instead, the cited reference must show exactly what is claimed. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990); Structural Rubber Prod. Co. v Park Rubber Co., 749 F.2d 707, 223 U.S.P.Q. 1264 (Fed. Cir. 1984).

With respect to independent claim 5, Bauer does not teach (a) a vehicle doorbeam, or (b) attachment portions extending from opposite ends of the tube for attaching the doorbeam to a vehicle door.

Because Bauer fails to disclose all of the elements of independent claims 5, it is respectfully submitted that the rejection with respect to Bauer under Section 102 is unfounded and/or overcome, and therefore should be withdrawn.

Applicant : Rainer B. Nees et al
Serial No. : 10/761,447
Page No. : 8

B. U.S. Patent 4,220,277 to Hesse et al

As originally presented, claim 5 was rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,220,277 to Hesse.

Hesse discloses a two-piece axle body that includes a tubular portion 4 and opposing end portions. The end portions are tapered to form a neck 3 and a journal 2. The axle body is formed by extruding and roll forming separate halves of the axle body, each with an integral end portion, and then joining the halves together. Col. 3, lines 10-15. The axle body may include a cross section with a non-uniform wall thickness.

With respect to claim 5, Hesse does not teach a) a vehicle doorbeam, b) a deformable web closed upon itself into a tube, or c) attachment portions that are adapted to attach a vehicle doorbeam to a vehicle door.

Because Hesse fails to disclose all of the elements of amended independent claim 5 it is respectfully submitted that the rejection with respect to Hesse under Section 102 is unfounded and/or overcome, and therefore should be withdrawn.

C. U.S. Patent 5,557,961 to Ni et al

As originally presented, claim 5 was rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,220,277 to Ni.

Ni discloses a method for forming a structural beam for use in an engine cradle. The engine cradle is comprised of two parts, including a U-shaped frame 12 and a straight cross member 14. The frame and cross member are formed by extruding a cylindrical tube of variable

Applicant : Rainer B. Nees et al
Serial No. : 10/761,447
Page No. : 9

thickness, and then placing the tube into a die wherein the interior of the tube is pressurized to force the walls of the tube into the interior space of the die.

With respect to claim 5, Ni does not disclose a) a vehicle doorbeam, b) a deformable web rolled closed to form a tube, or c) attachment portions that are adapted to attach to a vehicle door.

Because Ni fails to disclose all of the elements of amended independent claim 5 it is respectfully submitted that the rejection with respect to Ni under Section 102 is unfounded and/or overcome, and therefore should be withdrawn.

D. U.S. Patent 5,494,209 to Randlett et al

As originally presented, claims 1-7 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,494,209 to Randlett.

Randlett discloses an apparatus and a method for manufacturing a heat exchange tube. The tube is formed by passing a web through various forming rolls. As the tube is formed, the edges of the web are shaped with a fin insert before they are welded together. The angle of the fin insert influences the shape of the weld and can be varied to obtain desired weld characteristics. The inner surface of the tube may include a series of evenly spaced protrusions to enhance turbulent flow through the tube. The protrusions may be formed by milling, scarfing, other subtractive processes, or by roll forming. Randlett does not disclose any attachment portions or end portions for attaching the tube.

With respect to independent claims 1 and 5, Randlett does not disclose a) a

Applicant : Rainer B. Nees et al
Serial No. : 10/761,447
Page No. : 10

vehicle doorbeam or b) attachment portions that are adapted to attach to a vehicle door.

Because Randlett fails to disclose all of the elements of independent claims 1 and 5, it is respectfully submitted that the rejection with respect to Randlett under Section 102 is unfounded and/or overcome, and therefore should be withdrawn.

IV. Section 103 Rejection

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 2,085,829 to Rogers.

Rogers discloses a box girder beam whose sides have different thicknesses. Two of the walls have a first thickness and two of the walls have a second thickness. Each individual wall has a single, uniform thickness. The Rogers beam does not have attachment portions of any kind that are adapted to attach the beam to anything.

To establish a case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The teaching or suggestion to make the claimed combination must be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also In re Deminski, 796 F.2d 436, 230 USPQ 313

Applicant : Rainer B. Nees et al
Serial No. : 10/761,447
Page No. : 11

(Fed. Cir. 1986); In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992).

Applicants submit that 1) there is no suggestion or motivation – other than impermissible hindsight – to modify the box girder of Rogers to produce the present invention, and 2) a person of reasonable skill in the art of designing vehicle doorbeams would not look to the unrelated art of girders for a solution. With respect to independent claim 1, Rogers does not disclose, teach, or suggest (a) a vehicle doorbeam or (b) attachment portions extending from opposite ends of the tube for attaching the doorbeam to a vehicle door. The examiner asserts that the ends of the Rogers beam itself form attachment portions. However, the ends of the Rogers beam are unfinished, and are not adapted for attachment to any particular apparatus, let alone a vehicle door. Rogers nowhere suggests that a box girder could meet the requirements of a vehicle doorbeam.

Because Rogers does not disclose, teach, or suggest the present invention, it is respectfully submitted that the rejection with respect to Rogers under Section 103 is unfounded and/or overcome, and therefore should be withdrawn.

V. Dependent Claims

The dependent claims further define Applicants' invention and are therefore even more clearly allowable. Claims 2 and 6 further recite that the lateral edges of the unitary, one-piece tube are joined. Claims 3 and 7 further recite that the lateral edges are joined by a weld.

Applicant : Rainer B. Nees et al
Serial No. : 10/761,447
Page No. : 12

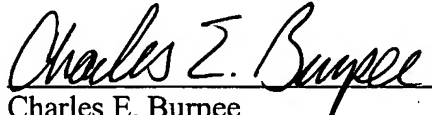
VI. Conclusion

In view of the above amendments and these remarks, Applicants respectfully submit that the present application is in condition for allowance. A notice to that effect is earnestly and respectfully requested.

Respectfully submitted,

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